Algebra 3/Trig: Dieckmann Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

HWK #5: Graphing Log and Exponential

**Graph the following logarithmic equations. State the transformations, y intercept, vertical asymptote, domain, and range.**

1. $y=log\_{2}x+1$ 2. $y=log\_{3}(x-2)-1$



|  |  |
| --- | --- |
| **x** | **y** |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **x** | **y** |
|  |  |
|  |  |

Transformation: Transformation:

Y – Int: \_\_\_\_\_\_\_\_\_ Y – Int: \_\_\_\_\_\_\_\_\_

Vertical Asymptote: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Vertical Asymptote: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Domain: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Domain: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Range: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Range: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. $y=log\_{4}(x+5)$ 4. $y=lnx-5$



|  |  |
| --- | --- |
| **x** | **y** |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **x** | **y** |
|  |  |
|  |  |

Transformation: Transformation:

Y – Int: \_\_\_\_\_\_\_\_\_ Y – Int: \_\_\_\_\_\_\_\_\_

Vertical Asymptote: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Vertical Asymptote: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Domain: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Domain: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Range: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Range: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5. $y=2^{x+2}$ 6. $y=\frac{1}{2}(2)^{x-1}+3$

|  |  |
| --- | --- |
| **x** | **y** |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **x** | **y** |
|  |  |
|  |  |



Transformation: Transformation:

Y – Int: \_\_\_\_\_\_\_\_\_ Y – Int: \_\_\_\_\_\_\_\_\_

Vertical Asymptote: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Vertical Asymptote: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Domain: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Domain: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Range: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Range: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7. $y=4^{x}+1$ 8. $y=4^{x+1}-2$

|  |  |
| --- | --- |
| **x** | **y** |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **x** | **y** |
|  |  |
|  |  |



Transformation: Transformation:

Y – Int: \_\_\_\_\_\_\_\_\_ Y – Int: \_\_\_\_\_\_\_\_\_

Vertical Asymptote: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Vertical Asymptote: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Domain: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Domain: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Range: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Range: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_